OneRiverDigital
ASSET MANAGEMENT

market notes: 5.8 x 10^22 – Don't Blink, You'll Miss the Merge

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The Merge is like upgrading a rocket ship after its launch. It is an epic engineering feat. The value of the Merge to Ethereum will be in attracting a deeper network over time. That will take patience – the Merge is not an immediate catalyst.

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1. Escape velocity. A simple, tidy equation quantifying what is needed to escape gravity. It's far less tidy in the behavioral sciences that govern digital ecosystems. "Functional" escape velocity is a moving target, achieved when everything else can be done on top of a base layer without changing it materially. Becoming the dominant base layer is the target in the digital space race. The Merge gets Ethereum closer to that target, hence the excitement around it.

2. The Ethereum protocol aims to dominate the digital space-race with the long-awaited Merge of the Mainnet and the Beacon chains (Figure 1). There are excellent resources explaining the Merge from technical to philosophical. Can the Merge fail? What if there is a hard fork? How long will smart contracts be locked? These are all questions extremely well covered. The Merge was planned so its flaws would be visible over a lengthy trial phase – 20 "shadow forks" on private testing networks were deployed along the way. Our focus is on investment dynamics.

3. Ethereum has already met the objectives of a successful layer 1, validating transactions without reliance on a third-party network. The migration to proof-of-stake is more of a philosophical shift than a required engineering one. In the past two years, the protocol has averaged 1.2 million blockchain transactions a day, securely and without downtime. The Merge doesn't change Ethereum's objectives, only the means. Transactions will now be validated by way of algorithmic selection of validators rather than computing competition. This is a material shift in narrative, steering clear of politically charged issues around energy consumption.

4. The question we are most asked is whether the Merge is in the price. Of course, it is. Even the most casual observer is familiar with the Merge and the spike in option open interest shows speculators are alert (Figure 2). It is an engineering upgrade, not a corporate merger evaluated on cash flows. The benefits of the Merge are only relevant with greater adoption and a deeper network. The Merge is an engineering feat that is sending out invitations, not directly initiating new participation in Ethereum.

5. So how should we think about the Merge and its value to ether? It is all about attracting users to the Ethereum base layer. It will be most successful when changes to the base layer are rare. How the Ethereum Network is valued will also undergo a material change. To use Ethereum you need to hold ether; holding and staking ether turns it into a bond-like asset. Ethereum's growing network will treat ether as the reserve asset to the ecosystem and staking that asset to support the validation of transactions will give it bond-like features of a reserve asset.

6. The network effect is in motion. The goal of any layer 1 is to be so foundational that anyone can build upon it with little reason to change it, like a Constitution. That building is happening, even in the crypto winter. Take Polygon, the most widely used Ethereum scaling solution (1.1% of our Core Index and 5.3% of Size Tilt). There are currently more than 37,000 applications running on the Polygon Network, an explosion from 200 in June 2021. These are leading to "real" products. Polygon is integrating Web 3.0 functionality into existing smartphones with the Nothing Phone (1) being the first. The coming wave of layer 2s will widen the set of opportunities.

7. The growing network will lead investors to see ether for its bond-like characteristics. There are two components of the ether-bond. The first is the coupon paid for staking ether. Payments are made to validators for their staking services, which takes little more than powering on your computer, connecting to internet, and running the latest software. The odds of being called upon to validate a transaction are inversely proportional to the number of validators. More validators means that a larger number of investors share in the rewards, lowering the coupon and vice versa (Figure 3).

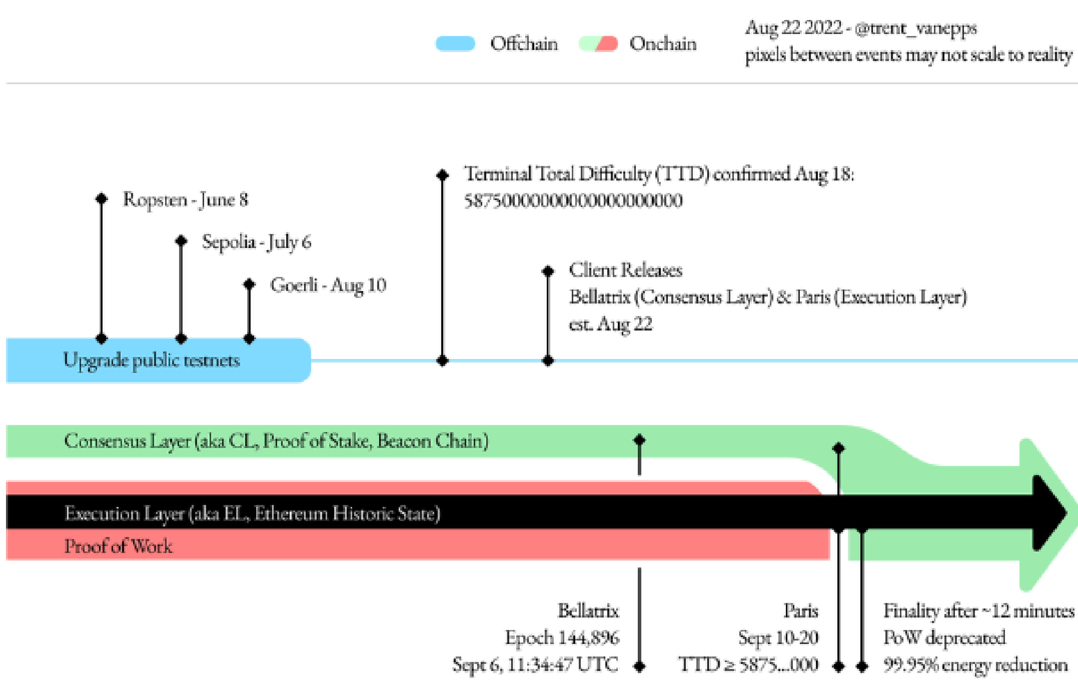
8. The second bond-like component is fees. You can think of this like a GDP warrant in traditional finance where the coupon is positively linked to activity in the economy. Fees on the Ethereum protocol – including tips paid to prioritize single or bundled transactions – will be earned by validators after the Merge. Stronger activity in the Ethereum economy leads to higher fees and more economics for staking. During last year's boom, gross fees were more than 15% annualized

share of the Ethereum market capitalization (Figure 4). With this year's downturn, fees have collapsed by 96% and a ratio of less than 1% annualized.

9. The two sources of yield work in opposite directions over the cycle – a very attractive feature for investors. In a boom scenario, a rise in staking demand leads to lower ether coupons, and more income is earned from fees. In a bust scenario, a decline in staking demand raises the ether coupons, and fee income declines. We anticipate this centering the yield around 6-8% over the next year – not bad for an invisible reserve asset in the future of finance. Ether's role in the financial ecosystem will compete with bond assets that are held for their surety of collateral – a valuation that is many multiples its current state.

10. It's the final countdown to the total terminal difficulty rate of 58750000000000000000000, expected around [September 15](). It'll be boring if all goes according to plan, nothing like the excitement of watching the force of a rocket launch. Alas, the dream of every successful layer 1 is precisely that – to be a boring, secure platform that is eventually taken for granted, invisible to the users who demand more from their tools. The Merge is one step closer to that reality.

Figure 1: Approaching the Merge

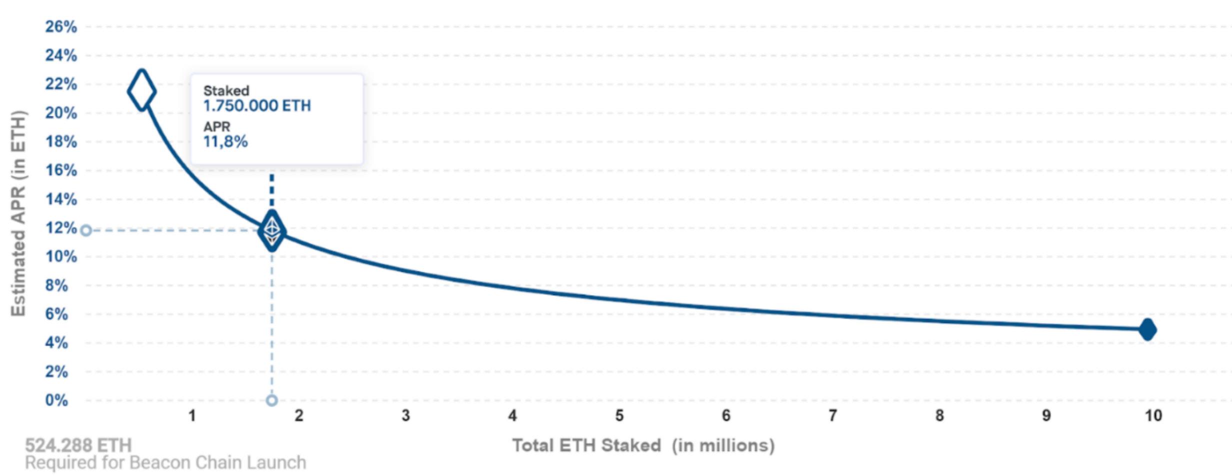


Source: [Mainnet Merge Announcement]().

Figure 2: Ether Options Open Interest, USD Billions

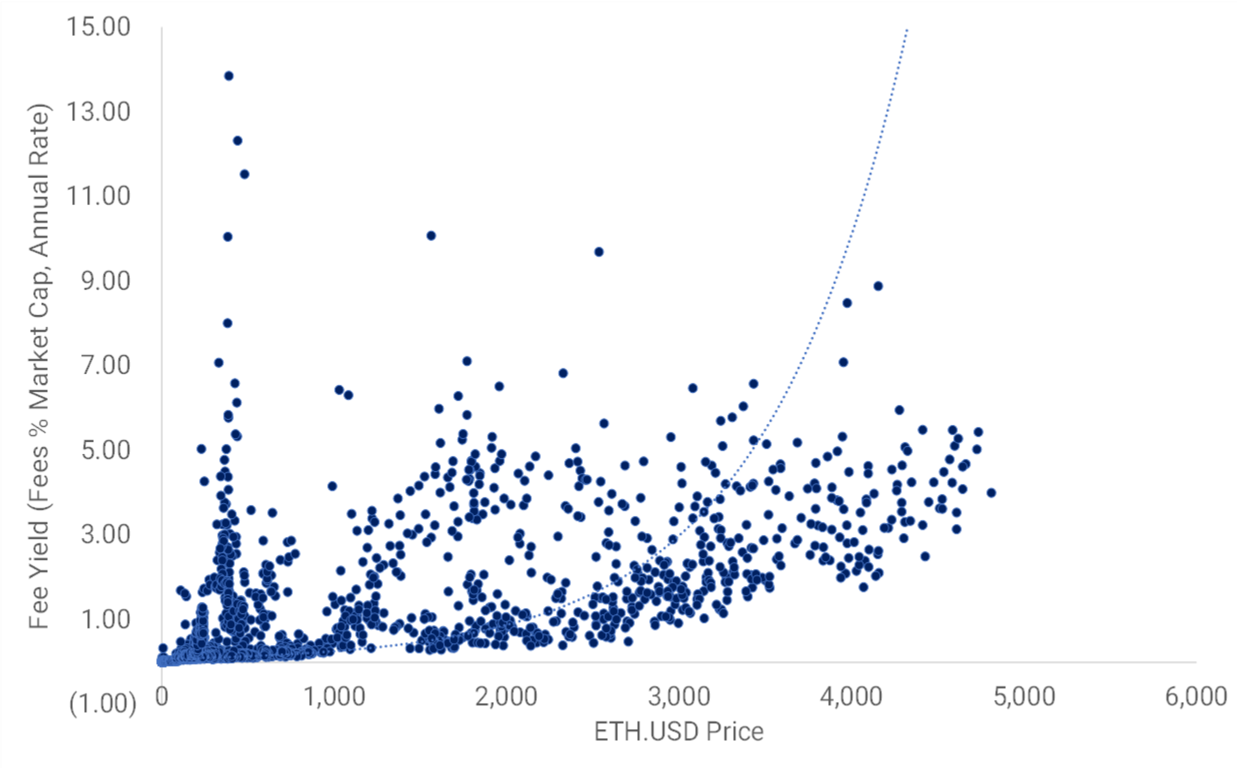
Source: Skew.com

Figure 3: Ethereum Perpetual Bond Coupon



Source: Staking Rewards. Current ETH Staked 13.6mn or 10.6% of total supply, median of top five staking assets 99.2%.

Figure 4: Fees Pro-Cyclical Yield Akin to GDP Warrant



Source: Coin metrics. One River Digital Calculations.

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